

## A Geyser of Energy Savings in Idaho

Idaho has harnessed the energy from its famous hot springs to heat dozens of buildings in Boise. Unfortunately, this local energy source is limited and most Idahoans rely on other fuels to heat their homes. For low-income families, who are particularly vulnerable to energy price increases and supply disruptions, keeping warm can be difficult. Low-income households shoulder a disproportionate energy burden, typically spending 14% of their annual income on energy, compared to 3.5% for other households. To alleviate this burden, Idaho partners with the U.S. Department of Energy (DOE) to implement the Weatherization Assistance Program (Weatherization). Weatherization reduces energy costs for low-income households by improving the energy efficiency of their homes, while ensuring their health and safety.

Idaho's Department of Health and Welfare administers the state's program and six local agencies deliver weatherization services to eligible residents across the state. When the program began in 1976, temporary measures, like covering windows with plastic, were emphasized. Weatherization has evolved into a sophisticated program with professionally trained crews who use advanced technologies to find comprehensive energy solutions.

Idaho crews use a computerized energy audit and diagnostic equipment, like the blower door, to determine the most cost-effective measures to install in each house. They also test heating units and appliances for gas leaks and carbon monoxide, an odorless, colorless gas that can be deadly in large quantities.

Typical weatherization measures include installing insulation; sealing ducts; tuning and repairing furnaces; and mitigating air infiltration. As part of weatherization, clients are educated on the proper use and maintenance of the installed measures.

### NATIONAL WEATHERIZATION PROGRAM

Homes weatherized in 1999	68,000
DOE allocations in 1999	\$135 million
Average annual energy cost savings per household	\$300
Average space heating savings	25-30%
Energy benefits returned for every \$1 invested	\$2.10
Jobs supported	7,000

### IDAHO

Homes weatherized in 1999 (with DOE \$)	1,261
DOE funding in 1999	\$1.1 million
Clients served in 1999	2,448
Elderly	17%
People with disabilities	24%
Families with children	57%

Many times the duties of weatherization crews fall outside the scope of "typical" weatherization activities. One crew assisted a client who owned many curious cats. Although these cats constantly interrupted the work, the crew diligently continued to install measures. At the end of the day, the crew was about to leave when the client realized one of the cats was missing. The cat was trapped in the heat duct that the crew had worked on. The Weatherization workers dismantled the duct to rescue the cat and then worked late to reassemble it.

### SPRINGING INTO ACTION TOGETHER

Idaho builds creative partnerships to leverage Weatherization dollars and expand program capabilities. In 1999, Idaho leveraged core DOE funding with more than \$2 million from utilities and landlord contributions to weatherize an additional 1,733 homes.

One Idaho agency collaborated with the U.S. Department of Agriculture (USDA) to provide Bernice Smith\* with a warm, safe home. While inspecting the home, crews recognized the poor condition of the roof and floor. An energy audit revealed the house lacked adequate insulation. A diagnostic test reported the furnace to be faulty. By combining Weatherization Program funds with USDA dollars, Bernice received a new roof, floor, and furnace. Crews also installed insulation in the attic and sealed air leaks throughout the house. Now, Bernice lives in a warm, energy-efficient home.



*A weatherization technician seals air leaks in the roof of this Idaho mobile home.*

Gertrude Jones\* used a coal furnace located in the basement to heat her home. At age 91, Gertrude had problems getting down the stairs to feed the furnace. She contacted Weatherization for a solution. After conducting an energy audit, the crew found the house lacked adequate insulation and the doors were points for air infiltration. They blew insulation into the walls and attic, sealed the doors, and installed a new gas furnace. Today, Gertrude lives in a warm, energy-efficient home that does not jeopardize her safety.

### STEADY FLOW OF BENEFITS

Weatherization produces energy savings for low-income families while safeguarding their health and safety. Weatherization measures save an average of \$300 on the household's annual energy bill. These savings allow clients to purchase essential

goods like food and medicine. Reducing energy bills for low-income families keeps money in the local economy that otherwise would be exported out to pay for energy.

Decreasing energy demand reduces electricity generation and associated power plant emissions, a significant source of air pollution. Helping low-income families lower their energy consumption improves local air quality and reduces adverse health effects, particularly asthma.

### WEATHERIZATION WORKS!

Weatherization produces a range of benefits for low-income households and communities. Nationally, for every \$1 invested in the program, Weatherization returns \$2.10 in energy-related benefits. Weatherization measures reduce national energy consumption and curb demand for imported oil. Weatherization works for Idaho and America!

*\*Names have been changed to protect the privacy of the subjects.*

### A FOUNTAIN OF SAFETY CHECKS

Weatherization reduces energy costs for low-income households, which provides a long-term economic boost. Weatherization also improves health and safety conditions, which can have a lifelong impact. Doris Johnston\*, an elderly client who suffered from chronic headaches, called the local weatherization agency to help her with expensive energy bills and to increase the home's comfort. Weatherization crews ran an energy audit and tested the furnace for carbon monoxide. They found the heat exchanger in the furnace was cracked and leaking dangerous levels of carbon monoxide, causing Doris' headaches. In addition to repairing the furnace, crews blew insulation into the walls and attic, wrapped the pipes, and installed a carbon monoxide detector. Weatherization measures reduced Doris' energy bills and eliminated the cause of her chronic headaches.



### TO LEARN MORE ABOUT THE WEATHERIZATION ASSISTANCE PROGRAM, CONTACT:

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Visit the Weatherization Web site at: [www.eren.doe.gov/buildings/weatherization\\_assistance](http://www.eren.doe.gov/buildings/weatherization_assistance)  
or call the Energy Efficiency and Renewable Energy Clearinghouse at: 1-800-DOE-3732



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